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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,283	06/01/2006	Juergen Dohmann	4601-0113PUS1	3130
2292 7590 07/02/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER BONK, TERESA				
ART UNIT 3725		PAPER NUMBER		
NOTIFICATION DATE 07/02/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/581,283

Applicant(s)

DOHMANN ET AL.

Examiner

Teresa M. Bonk

Art Unit

3725

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 26-32 is/are pending in the application.
- 4a) Of the above claim(s) 16-21 and 26-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-15 is/are rejected.
- 7) ☒ Claim(s) 8 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 and 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohama et al. (US Patent 6,044,684). Ohama et al. discloses a die apparatus for performing a flashless forging operation to manufacture the toothed portion of a steering rack, said die apparatus comprising: first (26) and second (14) die members and at least one punch member (40 or 36), each having a forming surface shaped substantially as the obverse of a portion of said toothed portion, and at least a portion of the forming surface of said first die member being shaped substantially as the obverse of the teeth of said rack, wherein said first and second die members are moveable towards each other (considered to be relative movement of the dies and as Applicant's drawings show in Figure 3A only die 14 moves) to a closed position thereby partially forging (Column 6, lines 1-9) said toothed portion from a blank placed in said die apparatus and forming a substantially closed cavity defined by said forming surfaces, said punch member being adapted to move into said cavity (Column 5, lines 3-4 and 15-16), once said die members are in said closed position, thereby completing said forging operation (Figure 6).

With regards to claim 2, Ohama et al. also discloses wherein said punch member is moveable into said closed cavity through an aperture in one of said die members (Column 5, lines 3-4 and 15-16).

With regards to claim 3, Ohama et al. also discloses wherein said aperture is in said second die member (14) and said punch member is moveable with respect to said second die member (Column 5, lines 4-5).

With regards to claim 4, Ohama et al. also discloses wherein said punch member is disposed substantially centrally and opposite said first die member, and is moveable towards said first die member (Figure 5).

With regards to claim 5, Ohama et al. also discloses wherein said die members abut against each other at said closed position (Figure 5).

With regards to claim 6, Ohama et al. also discloses wherein said at least one punch member comprises first (40) and second punch (36) members disposed on opposite sides of said cavity, between said first and second die members (Figure 6).

With regards to claim 7, Ohama et al. also discloses wherein said punch member is moveable by means of a mechanism operated by the motion of said die apparatus closing (driving unit, Column 5, lines 4-6 and 16-19).

With regards to claim 10, Ohama et al. also discloses wherein the cross section of said toothed portion is substantially D-shaped (see circled portions on attached Figure 4 on page 5 of this Office Action).

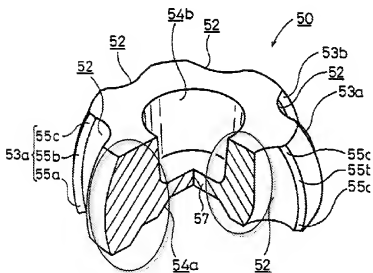
With regards to claim 11, Ohama et al. also discloses wherein said blank is a solid bar (Figure 1).

With regards to claim 12, Ohama et al. also discloses wherein said blank is cylindrical (Column 5, lines 65).

With regards to claim 14, Ohama et al. also discloses wherein said die apparatus further comprises at least one axially moveable end punch (40 or 36).

With regards to claim 15, Ohama et al. also discloses wherein said end punch is adapted to upset an end of said blank (Figure 6).

FIG. 4



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama et al. in view of Ross et al. (US Patent 3,802,248). Ohama et al. discloses the invention substantially as claimed except for wherein at least one of said die members is supported by a hydraulic cylinder pressurized by means of the die apparatus closing. Ross et al. is relied upon to teach a forging press wherein at least one of said die members is supported by a hydraulic cylinder (Column 1, lines 43-47) pressurized by means of the die apparatus closing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a hydraulic cylinder because applying a known technique to a known device ready for improvement yields predictable results.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama et al. in view of Daido Steel Co Ltd (JP 58-218339). Ohama et al. discloses the invention substantially as claimed except for wherein said blank is a hollow bar and said die apparatus further comprises a mandrel adapted to be inserted into said hollow bar prior to said forging operation. Daido Steel Co Ltd is relied upon to teach that wherein the blank is a hollow bar (hollow pipe) and the die apparatus comprises a mandrel (60) adapted to be inserted into the hollow bar prior to the forging operations (Figure 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the workpiece because simple substitution of one known element for another obtains predictable results.

Allowable Subject Matter

Claims 8 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed March 26, 2009 have been fully considered but they are not persuasive.

The Examiner points out that reference to the rack product does not limit or breathe life into the structure of the claimed apparatus. Ohama discloses an apparatus with first and second members and a punch member as required by the claims and therefore it would be capable of manufacturing a rack product.

With regards to the Applicant's arguments pertaining to the "toothed portions" limitation, the Examiner maintains that Ohama discloses "toothed portions," represented as grooves 20, shown in Figure 3. Upon considering the broadest reasonable interpretation of a "toothed" element or uniform projections, the Examiner maintains that Ohama's grooves meet the claimed limitations.

With regards to the Applicant's arguments pertaining to the "partially forging" limitations, the Examiner maintains that the Ohama reference sets forth "partially forging," as demonstrated by the relationship of the first die member 26 and the second die member 14, described in Column 6, lines 1-9. An additional or final forging step after the "partially forging"

step occurs when punch member 36/40 enters the closed cavity, as described in Column 6, lines 10-25.

With regards to claim 6, the Examiner maintains under the broadest reasonable interpretation, punches 40 and 36 are “between” or in the place separating first 26 and second 14 die members as shown in Figure 6.

With regards to Applicant’s arguments pertaining to claim 7, the Examiner maintains that claim 7 only requires the punch member to be “moveable by means of a mechanism operated by the motion of said die apparatus closing” and does not requires “wedge members (or) blocks (or) springs” as the Applicant states on page 13. Although Ohama’s driving unit is “unillustrated,” the driving unit moves the punch with respect to the die 14 and the movement of die 14 closes the die apparatus, Column 5, lines 13-20.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa M. Bonk whose telephone number is (571)272-1901. The examiner can normally be reached on Monday-Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on 571-272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dana Ross/
Supervisory Patent Examiner, Art Unit 3725

Teresa M. Bonk
Examiner
Art Unit 3725